UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

WW-16J

13 DEC 2004

Martha Clark Mettler
IDEM
100 N. Senate Ave.
P.O. Box 6015
Indianapolis, IN 46206

Dear Ms. Clark Mettler:

The United States Environmental Protection Agency (U.S. EPA) has reviewed the final Total Maximum Daily Load (TMDLs) for the Prairie Creek Watershed in Indiana, including the following waterbodies and their tributaries: North and South Fork Prairie Creek (7 segments), Barnes Creek, Bethel Creek, Flat Creek, Dinkin Creek, Antioch Creek, Killion Canal, Eagan Ditch Basin, and Prairie Creek (2 segments). They are located in the West Fork White River Basin. The Indiana Department of Environmental Management's (IDEM's) TMDLs address the E. coli impairment of recreational use in Daviess County. Based on this review, U.S. EPA has determined that Indiana's 16 TMDLs for E. coli meet the requirements of Section 303(d) of the Clean Water Act (CWA) and U.S. EPA's implementing regulations at 40 C.F.R. Part 130. Therefore, U.S. EPA hereby approves 16 TMDLs for the Prairie Creek Watershed in Indiana. The statutory and regulatory requirements, and U.S. EPA's review of Indiana's compliance with each requirement, are described in the enclosed decision document.

We wish to acknowledge Indiana's effort in submitting these TMDLs, addressing 16 E. coli impairments, and look forward to future TMDL submissions by the State of Indiana. If you have any questions, please contact Mr. Kevin Pierard, Chief of the Watersheds and Wetlands Branch at 312-886-4448.

Sincerely yours,

for Jo Lynn Traub
Director, Water Division

Enclosure

TMDL: Prairie Creek Watershed, Indiana
Date: 13 DEC 2004

DECISION DOCUMENT FOR APPROVAL OF THE PRAIRIE CREEK WATERSHED TMDL IN INDIANA

Section 303(d) of the Clean Water Act (CWA) and EPA's implementing regulations at 40 C.F.R. Part 130 describe the statutory and regulatory requirements for approvable TMDLs. Additional information is generally necessary for EPA to determine if a submitted TMDL fulfills the legal requirements for approval under Section 303(d) and EPA regulations, and should be included in the submittal package. Use of the verb "must" below denotes information that is required to be submitted because it relates to elements of the TMDL required by the CWA and by regulation. Use of the term "should" below denotes information that is generally necessary for EPA to determine if a submitted TMDL is approvable. These TMDL review guidelines are not themselves regulations. They are an attempt to summarize and provide guidance regarding currently effective statutory and regulatory requirements relating to TMDLs. Any differences between these guidelines and EPA's TMDL regulations should be resolved in favor of the regulations themselves.

1. Identification of Waterbody, Pollutant of Concern, Pollutant Sources, and Priority Ranking

The TMDL submittal should identify the waterbody as it appears on the State's/Tribe's 303(d) list. The waterbody should be identified/georeferenced using the National Hydrography Dataset (NHD), and the TMDL should clearly identify the pollutant for which the TMDL is being established. In addition, the TMDL should identify the priority ranking of the waterbody and specify the link between the pollutant of concern and the water quality standard (see section 2 below).

The TMDL submittal should include an identification of the point and nonpoint sources of the pollutant of concern, including location of the source(s) and the quantity of the loading, e.g., lbs/per day. The TMDL should provide the identification numbers of the NPDES permits within the waterbody. Where it is possible to separate natural background from nonpoint sources, the TMDL should include a description of the natural background. This information is necessary for EPA's review of the load and wasteload allocations, which are required by regulation.

The TMDL submittal should also contain a description of any important assumptions made in developing the TMDL, such as:

(1) the spatial extent of the watershed in which the impaired waterbody is located;
(2) the assumed distribution of land use in the watershed (e.g., urban, forested, agriculture);
(3) population characteristics, wildlife resources, and other relevant information affecting the characterization of the pollutant of concern and its allocation to sources;

(4) present and future growth trends, if taken into consideration in preparing the TMDL (e.g., the TMDL could include the design capacity of a wastewater treatment facility); and (5) an explanation and analytical basis for expressing the TMDL through *surrogate measures*, if applicable. *Surrogate measures* are parameters such as percent fines and turbidity for sediment impairments; chlorophyl *a* and phosphorus loadings for excess algae; length of riparian buffer; or number of acres of best management practices.

Comment:

Location Description: Prairie Creek is located in southwest Indiana, in Daviess County (Figure 1 of the TMDL submittal). The North and South Forks of Prairie Creek combine to form Prairie Creek, and were listed as impaired in Indiana's 2002 303(d) list for *E. coli.* Prairie Creek then discharges to the West Fork of the White River. In 2004, more segments were listed based on sampling done on other portions of the watershed. They include Prairie Creek, Barnes Creek, Bethel Creek, Flat Creek, Dinkin Creek, Antioch Creek, Killion Canal, Eagan Ditch, and other tributaries, which in total is most of the watershed and encompasses 107 miles. Both single samples and geometric mean samples often were above the standards for *E. coli.*

The sixteen impaired segments included in the TMDL submittal in the Section titled "Background", and listed in IDEM's 2002 Section 303(d) report, are found below:

Waterbody Name	303(d) List ID	Segment ID Number(s)	Length (miles)	Impairment
North Fork Prairie Creek	141	INW0281_T1044, INW0282_T1046, INW0283_T1047, INW0281_00	31.0	*E. coli*
South Fork Prairie Creek	141	INW0284_T1049, INW0285_T1050, INW0286_T1051	11.0	*E. coli*
Barnes Creek and other Tributaries	141	INW0282_00	10.0	*E. coli*
Bethel Creek and other Tributaries	141	INW0283_00	6.0	*E. coli*
Flat Creek and other Tributaries	141	INW0284_00	9.0	*E. coli*
Dinkin Creek and other Tributaries	141	INW0285_00	5.0	*E. coli*
Antioch Creek	141	INW0286_T1166	3.0	*E. coli*
Killion Canal and	141	INW0287_00	18.0	*E. coli*
Eagan Ditch Basin	141	INW0286_T1167	6.0	*E. coli* Nutrients
Prairie Creek	141	INW0287_T1063, INW0288_T1064	8.0	*E. coli* Impaired Biotic Communities

Topography and Land Use: As of 1992, approximately 89% of the landuse in the Prairie Creek watershed is agricultural, the remaining is approximately 1% developed, 3% palustrine wetlands, 6% terrestrial, and 0.6% water. There was not a large change since the previous evaluation in the mid-1970s, which showed 93% agricultural land use.

Pollutant of concern: The pollutant of concern is *E. coli*. Nutrients and impaired biotic communities will be addressed at a later date.

Pollutant sources: There are both point sources and nonpoint sources of *E. coli* in the Prairie Creek watershed. The nonpoint sources include:

- Septic systems - Daviess County Health Department reports 40 - 45% failure rate during the past year (according to IDEM communication with the County Health Department within the TMDL submittal)
- Agricultural runoff - most of the land cover in the watershed is agricultural
- Wildlife - deer, doves, badger, osprey, otters, and short-eared owls

There are two NPDES permitted facilities that are point sources contributing to the *E. coli* problem. They are also listed in Table 1 of the TMDL submittal.

ING040162	Black Beauty Coal Company, Viking Mine	not *E. coli* source
IN0034932	Town of Montgomery WWTP	not *E. coli* source

There are 41 confined feeding operations (CFOs) and 2 confined animal feeding operations (CAFOs) in the watershed. The two CAFOs have general permits. The regulations (327 IAC 16, 327 IAC 15) require that operations "not cause or contribute to an impairment of surface waters of the state". There are no enforcement actions at this time so these locations are not considered to be a significant source of *E. coli*, according to the State. Small animal operations may be a source, though there is no significant data to support this. These facillities are listed in Table 2 and are in the TMDL submittal.

Priority ranking: IDEM states that the TMDL development schedule corresponds with their basin-rotation water quality monitoring schedule. The development of most TMDLs are based on the schedule to take advantage of all available resources. Prioritization is based on whether the designated uses are being met, the magnitude of the impairment, and other plans for the watershed. For example, some watershed groups may want to implement some Best Management Practices (BMPs) and assess their success without a TMDL, or may be awaiting guidance from the U.S. EPA.

EPA finds that the TMDL submittal from IDEM satisfies all requirements concerning this first element.

Table 2: Permitted Confined Feeding Operations and Confined Animal Feeding Operations in the Prairie Creek Watershed

			Approved Animals							
Log Number	Name	NPDES Permit Number	Nursery Pig	Growerfinishers	Sowboars	Beef	Dairy	Dairy Calves	Layers	Turkeys
100	Keith E. Graber & Son Dairy						205			
101	Udder Delite Dairy, Inc						195	65		
269	RL Wilson Family Farms	ING800269		960						68500
609	Sand Hill Pork, Inc		640	1200	366					
611	Layer Operation								139000	
1331	Staubaugh Farms					275				
1370	Steve Biggins		475	475						
3510	Lloyd Graber		500	500						
4070	Willis Graber			820						
4094	Raymond Graber									17200
4118	Burkhart Farms		840	500	191					
4203	Adrian O'Conner									22000
4441	Eaton Farms			900						
4443	David E. Knepp & Sons									54000
4453	Loren Graber									54000
4459	Lloyd Graber		1000							
4499	Larry Swartzentruber		240	780	230					
4516	John R Knepp		500		317					
4530	E. Dale Stoll		200	300	82					
4531	Omer Graber Farm	ING804531			558					
4543	Ira Wagler			540						
4571	Enos Wittmer		200	710	132	12				
4599	Phil Myers		325	570	106	95				
4609	Leroy Wittmer		1644	400						
4636	Melvin W Graber		200	520	20					

2. Description of the Applicable Water Quality Standards and Numeric Water Quality Target

The TMDL submittal must include a description of the applicable State/Tribal water quality standard, including the designated use(s) of the waterbody, the applicable numeric or narrative water quality criterion, and the antidegradation policy. (40 C.F.R. §130.7(c)(1)). EPA needs this information to review the loading capacity determination, and load and wasteload allocations, which are required by regulation.

The TMDL submittal must identify a numeric water quality target(s) – a quantitative value used to measure whether or not the applicable water quality standard is attained. Generally, the pollutant of concern and the numeric water quality target are, respectively, the chemical causing the impairment and the numeric criteria for that chemical (e.g., chromium) contained in the water quality standard. The TMDL expresses the relationship between any necessary reduction of the pollutant of concern and the attainment of the numeric water quality target. Occasionally, the pollutant of concern is different from the pollutant that is the subject of the numeric water quality target (e.g., when the pollutant of concern is phosphorus and the numeric water quality target is expressed as Dissolved Oxygen (DO) criteria). In such cases, the TMDL submittal should explain the linkage between the pollutant of concern and the chosen numeric water quality target.

Comment:

The TMDL submittal describes designated uses, numeric criteria, and antidegradation policy of the Clean Water Act.

Use Designation: The impaired designated use for the waterbodies in the Prairie Creek watershed is for total body contact recreational use during the recreational season, April 1st through October 31st.

Narrative Standards: The narrative criteria are the general water quality criteria that apply to all surface waters. These criteria state that all waters must be free from sludge; floating debris; oil and scum; color- and odor-producing materials; substances that are harmful to human, animal or aquatic life; and nutrients in concentrations that may cause algal blooms.

Numeric Standards: 327 IAC 2-1-6(d) established the total body contact recreational use *E. coli* Water Quality Standard (WQS) for all waters in the non-Great Lakes system as follows: "*E. coli* bacteria, using membrane filter (MF) count, shall **not exceed one hundred twenty-five (125) per one hundred (100) milliliters as a geometric mean** based on not less than five (5) samples equally spaced over a thirty (30) day period **nor exceed two hundred thirty-five (235) per one hundred (100) milliliters in any one (1) sample in a thirty (30) day period.**"

Targets: the target is the standard as stated in the previous paragraph, for both the single sample standard and geometric mean standard, which is applicable from April 1st through October 31st.

EPA finds that the TMDL submittal from IDEM satisfies all requirements concerning this second element.

3. Loading Capacity - Linking Water Quality and Pollutant Sources

A TMDL must identify the loading capacity of a waterbody for the applicable pollutant. EPA regulations define loading capacity as the greatest amount of a pollutant that a water can receive without violating water quality standards (40 C.F.R. §130.2(f)).

The pollutant loadings may be expressed as either mass-per-time, toxicity or other appropriate measure (40 C.F.R. §130.2(i)). If the TMDL is expressed in terms other than a daily load, e.g., an annual load, the submittal should explain why it is appropriate to express the TMDL in the unit of measurement chosen. The TMDL submittal should describe the method used to establish the cause-and-effect relationship between the numeric target and the identified pollutant sources. In many instances, this method will be a water quality model.

The TMDL submittal should contain documentation supporting the TMDL analysis, including the basis for any assumptions; a discussion of strengths and weaknesses in the analytical process; and results from any water quality modeling. EPA needs this information to

review the loading capacity determination, and load and wasteload allocations, which are required by regulation.

TMDLs must take into account *critical conditions* for stream flow, loading, and water quality parameters as part of the analysis of loading capacity. (40 C.F.R. §130.7(c)(1)). TMDLs should define applicable *critical conditions* and describe their approach to estimating both point and nonpoint source loadings under such *critical conditions*. In particular, the TMDL should discuss the approach used to compute and allocate nonpoint source loadings, e.g., meteorological conditions and land use distribution.

Comment:

Loading capacity: the loading capacity is the standard, that is,

- 125/100 ml (geometric mean (5) samples equally spaced over a thirty (30) day period),
- nor exceed 235/100ml (one (1) sample in a thirty (30) day period.)

Method for cause and effect relationship: The *E. coli* load enters the waterbody from both point and nonpoint source loads. Downstream from the mouth of the Prairie Creek is the Petersburg, Indiana U. S. Geological Survey (USGS) gage that was used for flow data in developing the load duration curve. The flow measured at the gage includes the West Fork White River watershed and the Prairie Creek watershed. To calculate the individual Prairie Creek flow as a proportion of the total volume of flow from the West Fork White River, the total flow from the gage was multiplied by the percent or proportion of drainage area contributed by Prairie Creek. The calculated flow number and drainage area for the Prairie Creek watershed were then used to create the load duration curves for the Prairie Creek watershed.

The flow data are used for flow duration curves. The curves reflect a range of natural occurrences from extremely high flows to extremely low flows. The flow curves are then transformed to load duration curves by applying water quality criteria values for *E. coli* and appropriate conversion factors. Then the existing monitored water pollutant loads from various types of locations (wet weather/nonpoint sources, or dry weather/point sources) are added to the curve and other conversion factors are applied. In this way it can be determined which locations contribute loads above or below the water quality standard, or target, line. Then the next step is to determine where reductions need to occur.

Critical conditions: the load duration curve represents pollutants during both dry periods and the washoff during storm events. Both of these conditions are critical for the conceptual model in describing how the pollutants behave in a natural environment and were addressed in developing the curve.

EPA finds that the TMDL submittal from IDEM satisfies all requirements concerning this third element.

4. Load Allocations (LAs)

EPA regulations require that a TMDL include LAs, which identify the portion of the loading capacity attributed to existing and future nonpoint sources and to natural background. Load allocations may range from reasonably accurate estimates to gross allotments (40 C.F.R. §130.2(g)). Where possible, load allocations should be described separately for natural background and nonpoint sources.

Comment:

Load Allocation: The load allocation is equal to the Water Quality Standard: 125/100 ml (geometric mean (5) samples equally spaced over a thirty (30) day period), nor exceed 235/100ml (one (1) sample in a thirty (30) day period).

The assumption used by the State in this load allocation strategy is that there are equal bacterial loads per unit area for all lands within the watershed. The responsibility for reducing the loads is relative to the amount of land under the jurisdiction of the various local governments. "This gives a clear indication of the relative amount of effort that will be required by each entity to restore and maintain the designated total body contact recreational use of the Prairie Creek watershed." This concept is exemplified by Table 3 below taken from the TMDL submittal, indicating amounts of land in each Township in the watershed that will be responsible for reductions, with reductions in direct proportion to the percentage of land in each township.

Table 3: Land Area Distribution for the Prairie Creek Watershed

Municipality	Square Mile	Percent
Barr Township	39.46	26
Washington Township	31.378	21
Bogard Township	26.849	18
Van Buren Township	24.02	16
Steele Township	20.13	13
Madison Township	8.72	6
Perry Township	1.269	0.84
Total	151.83	100

EPA finds that the TMDL submittal from IDEM satisfies all requirements concerning this fourth element.

5. Wasteload Allocations (WLAs)

EPA regulations require that a TMDL include WLAs, which identify the portion of the loading capacity allocated to individual existing and future point source(s) (40 C.F.R. §130.2(h), 40 C.F.R. §130.2(i)). In some cases, WLAs may cover more than one discharger, e.g., if the source is contained within a general permit.

The individual WLAs may take the form of uniform percentage reductions or individual mass based limitations for dischargers where it can be shown that this solution meets WQSs and

does not result in localized impairments. These individual WLAs may be adjusted during the NPDES permitting process. If the WLAs are adjusted, the individual effluent limits for each permit issued to a discharger on the impaired water must be consistent with the assumptions and requirements of the adjusted WLAs in the TMDL. If the WLAs are not adjusted, effluent limits contained in the permit must be consistent with the individual WLAs specified in the TMDL. If a draft permit provides for a higher load for a discharger than the corresponding individual WLA in the TMDL, the State/Tribe must demonstrate that the total WLA in the TMDL will be achieved through reductions in the remaining individual WLAs and that localized impairments will not result. All permitees should be notified of any deviations from the initial individual WLAs contained in the TMDL. EPA does not require the establishment of a new TMDL to reflect these revised allocations as long as the total WLA, as expressed in the TMDL, remains the same or decreases, and there is no reallocation between the total WLA and the total LA.

Comment:

Wasteload Allocation (WLA): The two National Pollutant Discharge Elimination System (NPDES) facilities must meet their permit limits and not violate water quality standards. The same applies to the two CAFOs in the watershed. The NPDES facilities are the Town of Montgomery WWTP (IN0034934) and Black Beauty Coal Company, Viking Mine (ING040162). The CAFOs are R.L. Wilson Family Farms (ING800269) and Omer Graber Farm (ING804531). The waste load allocation is equal to the Water Quality Standard: 125/100 ml (geometric mean (5) samples equally spaced over a thirty (30) day period), nor exceed 235/100ml (one (1) sample in a thirty (30) day period).

EPA finds that the TMDL submittal from IDEM satisfies all requirements concerning this fifth element.

6. Margin of Safety (MOS)

The statute and regulations require that a TMDL include a margin of safety (MOS) to account for any lack of knowledge concerning the relationship between load and wasteload allocations and water quality (CWA §303(d)(1)(C), 40 C.F.R. §130.7(c)(1)). EPA's 1991 TMDL Guidance explains that the MOS may be implicit, i.e., incorporated into the TMDL through conservative assumptions in the analysis, or explicit, i.e., expressed in the TMDL as loadings set aside for the MOS. If the MOS is implicit, the conservative assumptions in the analysis that account for the MOS must be described. If the MOS is explicit, the loading set aside for the MOS must be identified.

Comment:

There is an implicit margin of safety because no rate of decay was used for the pathogens. Since pathogenic organisms have a more limited capability of surviving outside their hosts, a rate of decay would normally be used. However, it was determined by IDEM that it is more conservative to use the water quality standard of 125/100ml *E. coli*, and not to apply a rate of

decay which could result in a discharge limit greater than the water quality standard. EPA finds that the TMDL submittal from IDEM contains an appropriate MOS satisfying all requirements concerning this sixth element.

7. Seasonal Variation

The statute and regulations require that a TMDL be established with consideration of seasonal variations. The TMDL must describe the method chosen for including seasonal variations. (CWA §303(d)(1)(C), 40 C.F.R. §130.7(c)(1)).

Comment:

The TMDL is expressed by using WQS for total body contact during the recreational season (April 1st through October 31st) defined previously. Any high and low flows are addressed within the TMDL because as a concentration-based TMDL all the standards will be met regardless of the season or flow events.

EPA finds that the TMDL submittal from IDEM satisfies all requirements concerning this seventh element.

8. Reasonable Assurances

When a TMDL is developed for waters impaired by point sources only, the issuance of a National Pollutant Discharge Elimination System (NPDES) permit(s) provides the reasonable assurance that the wasteload allocations contained in the TMDL will be achieved. This is because 40 C.F.R. 122.44(d)(1)(vii)(B) requires that effluent limits in permits be consistent with "the assumptions and requirements of any available wasteload allocation" in an approved TMDL.

When a TMDL is developed for waters impaired by both point and nonpoint sources, and the WLA is based on an assumption that nonpoint source load reductions will occur, EPA's 1991 TMDL Guidance states that the TMDL should provide reasonable assurances that nonpoint source control measures will achieve expected load reductions in order for the TMDL to be approvable. This information is necessary for EPA to determine that the TMDL, including the load and wasteload allocations, has been established at a level necessary to implement water quality standards.

EPA's August 1997 TMDL Guidance also directs Regions to work with States to achieve TMDL load allocations in waters impaired only by nonpoint sources. However, EPA cannot disapprove a TMDL for nonpoint source-only impaired waters, which do not have a demonstration of reasonable assurance that LAs will be achieved, because such a showing is not required by current regulations.

Comment:

One of the reasonable assurances in the TMDL submittal includes CFO and CAFO practices that will not contribute to impairment of the watershed. Further, there is a 319 proposal under negotiation to commit resources to reduce nonpoint sources. The proposal will include implementation to reduce *E. coli*. Further, IDEM has hired a Watershed Specialist for this area of the State. The coordinator will be responsible for assisting stakeholders with projects and gaining interest in improving water quality in the Prairie Creek watershed. Other potential future activities describe BMPs that include the following possible measures: riparian area management; manure collection and storage; contour row crops; no-till farming, manure nutrient testing; drift fences to direct livestock movement; pet clean-up in urban areas; and public education for septic management that reduces leakage and removes illicit discharges.

EPA finds that this criterion has been adequately addressed.

9. Monitoring Plan to Track TMDL Effectiveness

EPA's 1991 document, Guidance for Water Quality-Based Decisions: The TMDL Process (EPA 440/4-91-001), recommends a monitoring plan to track the effectiveness of a TMDL, particularly when a TMDL involves both point and nonpoint sources, and the WLA is based on an assumption that nonpoint source load reductions will occur. Such a TMDL should provide assurances that nonpoint source controls will achieve expected load reductions and, such TMDL should include a monitoring plan that describes the additional data to be collected to determine if the load reductions provided for in the TMDL are occurring and leading to attainment of water quality standards.

Comment:

Monitoring will occur on the 5-year rotating basin schedule or when a portion of the TMDL implementation is in place. Monitoring will be adjusted as needed for continued source identification and determination of whether standards are being met.

EPA finds that this criterion has been adequately addressed.

10. Implementation

EPA policy encourages Regions to work in partnership with States/Tribes to achieve nonpoint source load allocations established for 303(d)-listed waters impaired by nonpoint sources. Regions may assist States/Tribes in developing implementation plans that include reasonable assurances that nonpoint source LAs established in TMDLs for waters impaired solely or primarily by nonpoint sources will in fact be achieved. In addition, EPA policy recognizes that other relevant watershed management processes may be used in the TMDL process. EPA is not required to and does not approve TMDL implementation plans.

12. Submittal Letter

A submittal letter should be included with the TMDL submittal, and should specify whether the TMDL is being submitted for a *technical review* or *final review and approval.* Each final TMDL submitted to EPA should be accompanied by a submittal letter that explicitly states that the submittal is a final TMDL submitted under Section 303(d) of the Clean Water Act for EPA review and approval. This clearly establishes the State's/Tribe's intent to submit, and EPA's duty to review, the TMDL under the statute. The submittal letter, whether for technical review or final review and approval, should contain such identifying information as the name and location of the waterbody, and the pollutant(s) of concern.

Comment:

EPA received the Prairie Creek Watershed TMDL on November 8, 2004, accompanied by a submittal letter dated November 4, 2004. In the submittal letter, IDEM stated "the submission includes the Final TMDL, the model for the Final TMDL, and the response to the comment received during the public comment period". The letter states that the Prairie Creek Watershed is impaired for Recreational Use on Indiana's 303(d) list due to *E. coli.*

13. Conclusion

After a full and complete review, EPA finds that the IDEM submittal determines standard-based concentrations for a total of 16 TMDLs for Prairie Creek, Daviess County, Indiana. The allocations satisfy all of the elements of an approvable TMDL. This approval concerns the waterbody segments and impairments set forth in the Table below, also shown on page 2 in Section 1 of this document. Impairments addressed in these TMDLs are pathogens from the pollutant *E. coli*.

Comment:

There are several suggestions for BMPs in the TMDL watershed. They include structural or managerial practices such as:

- riparian management to protect streambeds and riverbanks;
- manure collection and storage that protects surface water and ground water from runoff;
- plant contour row crops perpendicular to the slope of the land;
- no-till farming to reduce wind and water erosion, catch snow, conserve soil and water, protect water quality, and provide wildlife habitat; and
- maintenance of plant residue to protect soil particles, increase infiltration, and reduce wind and water speed over the surface.

EPA finds that this criterion has been adequately addressed.

11. Public Participation

EPA policy is that there should be full and meaningful public participation in the TMDL development process. The TMDL regulations require that each State/Tribe must subject calculations to establish TMDLs to public review consistent with its own continuing planning process (40 C.F.R. §130.7(c)(1)(ii)). In guidance, EPA has explained that final TMDLs submitted to EPA for review and approval should describe the State's/Tribe's public participation process, including a summary of significant comments and the State's/Tribe's responses to those comments. When EPA establishes a TMDL, EPA regulations require EPA to publish a notice seeking public comment
(40 C.F.R. §130.7(d)(2)).

Provision of inadequate public participation may be a basis for disapproving a TMDL. If EPA determines that a State/Tribe has not provided adequate public participation, EPA may defer its approval action until adequate public participation has been provided for, either by the State/Tribe or by EPA.

Comment:

The TMDL was public noticed from September 27, 2004 to October 27, 2004. Invitations to the stakeholder meeting were sent on September 14, 2004. The meeting was held to provide an overview of the draft TMDL and provide an opportunity for public comments. The stakeholder meeting took place on October 7, 2004, at the Carnegie Public Library, 100 W. Main Street, Washington, Indiana. The presentation for the public meeting was included in the final TMDL submittal. Copies of the draft TMDL were posted on the IDEM's Web site at: http://www.in.gov/idem/water/planbr/wqs/tmdl/tmdldocs.html. U.S. EPA sent in comments to the draft TMDL and they were adequately addressed in the final TMDL. The public had no comments.

EPA finds that the TMDL submittal from Indiana satisfies all requirements concerning this eleventh element.

Waterbody Name	303(d) List ID	Segment ID Number(s)	Length (miles)	Impairment
North Fork Prairie Creek	141	INW0281_T1044, INW0282_T1046, INW0283_T1047, INW0281_00	31.0	*E. coli*
South Fork Prairie Creek	141	INW0284_T1049, INW0285_T1050, INW0286_T1051	11.0	*E. coli*
Barnes Creek and other Tributaries	141	INW0282_00	10.0	*E. coli*
Bethel Creek and other Tributaries	141	INW0283_00	6.0	*E. coli*
Flat Creek and other Tributaries	141	INW0284_00	9.0	*E. coli*
Dinkin Creek and other Tributaries	141	INW0285_00	5.0	*E. coli*
Antioch Creek	141	INW0286_T1166	3.0	*E. coli*
Killion Canal and other Tributaries	141	INW0287_00	18.0	*E. coli*
Eagan Ditch Basin	141	INW0286_T1167	6.0	*E. coli* Nutrients
Prairie Creek	141	INW0287_T1063, INW0288_T1064	8.0	*E. coli* Impaired Biotic Communities